

---

# RTO Technical Publications:

## a quarterly listing

---

JULY 2003

NUMBER 03-02

April 1, 2003 through June 30, 2003

This is a listing of recent unclassified RTO technical publications processed by the NASA Center for AeroSpace Information. Reports may be downloaded for free from the RTO website at <http://www.rta.nato.int> or they may be purchased from the NASA Center for AeroSpace Information, 7121 Standard Drive, Hanover, MD 21076-1320 USA, phone 301-621-0390, fax 301-621-0134. Prices and order forms are available from the NASA STI website at <http://www.sti.nasa.gov>. An automatic distribution of unclassified RTO technical publications in CD-ROM is also available within the U.S. through the NASA Standing Order Service from the NASA Center for AeroSpace Information.

**20030022686** NASA Glenn Research Center, Cleveland, OH, USA

### **Site Occupancy of Ternary Additions to B2 Alloys**

Bozzolo, Guillermo H.; Noebe, Ronald D.; Amador, Carlos, Elsevi; *Intermetallics*; January 2002; ISSN 0966-9795; Volume 10, pp. 149-159; In English

Report No.(s): RTOP 708-31-13; Copyright; Avail: Other Sources

In this broad-based survey study, the substitutional site preference of ternary alloying additions to B2 compounds (stable at room temperature and 50/50 composition) is determined using the Bozzolo-Ferrante-Smith (BFS) method for alloys. The method is applied to Ni, Al, Ti, Cr, Cu, Co, Fe, Ta, Hf, Mo, Nb, W, V and Ru additions to NiAl, FeAl, CoAl, CoFe, CoHf, CoTi, FeTi, RuAl, RuSi, RuHf, RuTi, and RuZr. The results are compared, when available, to experimental data and other theoretical results.

Author

*Ternary Alloys; Nickel Aluminides; Boron Alloys; Intermetallics; Computerized Simulation*

**20030033002** Research and Technology Organization, Neuilly-sur-Seine, France

### **Handbook on Long Term Defence Planning**

Bakken, Bent Erik; April 2003; 54 pp.; In English; Original contains color illustrations

Report No.(s): RTO-TR-069; AC/323(SAS-025)TP/41; Copyright; Avail: CASI; [A04](#), CD-ROM; [C02](#), Hardcopy

Common force planning practices are critical to NATO cohesiveness, also operationally. This Handbook is based on a review of current long-term planning practices in many NATO bodies and nations. Long-term refers the issues where planning focus is more than ten, typically twenty, years into the future. A common framework is provided to help planners in understanding the context and content of their work. It is hoped that the framework will enable increased and shared processual understanding within the alliance and PfP nations. The framework is described in detail; consisting in ten sequential steps. From Analysis of the future environment at the beginning until Establishing a force structure at the end. The Book contains one appendix where current NATO long term force planning is explained and commented in light of the framework. A second appendix lists various referenced analytical models, simulations and tools that are used in NATO and the nations.

Author

*Military Operations; Military Technology; Armed Forces (United States); Armed Forces (Foreign); North Atlantic Treaty Organization (NATO); Resources Management; Forecasting*

**20030033014** Research and Technology Organization, Neuilly-sur-Seine, France

### **Urban Operations in the Year 2020**

April 2003; 140 pp.; In English; Original contains color illustrations; CD-ROM contains full text in PDF format

Report No.(s): RTO-TR-071; AC/323(SAS-030)TP/35; Copyright; Avail: CASI; [A07](#), CD-ROM; [C01](#), Hardcopy

This is the final report by the SAS-030 Study Group into Urban Operations in the year 2020. In this study recommendations are given to RTA and NATO. The recommendations are based upon the approach as explained underneath. The study group examined the future urban environment, stresses the growing importance of Urban Operations and derived capabilities needed at the operational level to successfully operate in such an environment. In the study the conceptual framework USECT (Understand, Shape, Engage, Consolidate, Transition) was analyzed and future and more traditional operational concepts were developed and selected. Based on the operational level capabilities, new System Concepts were developed and these materiel solutions were analysed during an Urban Seminar Wargame where also non-materiel solutions were examined. During the study extensive ranking was helpful to determine the most promising System Concepts and other solutions.

Author

*Military Operations; Cities; War Games; Operations Research; Interoperability*